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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,789	05/14/2001	Edwin Frank Barry	800.0079	8409

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EXAMINER

SHIN, CHRISTOPHER B

ART UNIT PAPER NUMBER

2182

DATE MAILED: 12/26/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/854,789

Applicant(s)

Edwin Frank Barry

Examiner

Christopher Shin

Art Unit

2182



— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on Nov 5, 2001

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 1-15 and 38-46 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☒ Claim(s) 1-8, 14, 15, 38, 39, and 42-46 is/are allowed.

6) ☒ Claim(s) 9-13, 40, and 41 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some\* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_

20) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The Amendment filed November 5, 2001 has been entered and carefully considered. Claims 1-15 & 38-46 are pending in the application.

#### ***Response to Arguments***

2. Applicant's arguments filed November 5, 2001 have been fully considered but they are not persuasive.

The arguments for the claims 9-13 & 40-41 are still not found to be persuasive. The applicant did not amended or specifically presented arguments for the above claims.

3. As for the remainder claims 1-8, 14-15, 38-39, and 42-46, the examiner finds the applicant's Amendments and Remarks persuasive when the above remainder claims are interpreted in accordance with the specification & Remarks.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9-10, and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrell et al. (5,301,287).

i. In figure 3 & the respective description section teaches the claimed limitations as follows:

#### **Claims 9-10, 40-41**

##### **Herrell (figure 3)**

- apparatus for performing VID to PID translation/translation logic for data element to be accessed within local memory of a PE
- feature of column 2, lines 54-57

- direct memory access controller can access PE memories according to their VIDs
  - feature of (22) accessing (32) using (222)
- DMA controller
  - feature of (22, 222)
- memory maintained in the DMA controller for storing a processing element VID-to-PID table
  - feature of column 8, lines 54-59
- memory is maintained in the CTU of the DMA controller
  - feature of col 11, lines 51-55, maintained in the (222) of (22)
- CTU further comprises AGU which receives CTU transfer instruction which specifies a starting address which is used by the AGU to generate an initial VID
  - feature of col 11, lines 18-36
- VID-to-PID table is stored in a programmable register and the programmable register loaded utilizing a DMA instruction
  - feature of VtoP of (222 & 223)
- initial VID is mapped to PID by the translation logic
  - feature of (223 & 223)
- DMA bus for providing the translated PID as a first component of PE address
  - feature of bus 21 connected to (VtoP)
- translation vector
  - common feature of VID-PID translation

ii. As for claims 9-10 & 40-41, the difference between the claimed invention and the teachings of the Herrell reference is that the reference does not expressly/identically disclose the same environment of Processing Element/Memory. The reference teaches an environment that are substantially/functionally identical to the claimed invention. In addition, the DMA technique with Virtual to Physical translation was commonly utilized in many different system environments where data transfer is desired, which is one of the basic operation/function of data processing systems in the art. Therefore, it would have been obvious at the time was made to one skill in the art utilize such well known and commonly practiced technique in the claimed system, as taught by Herrell in combination with the common knowledge in the art, as discussed above.

6. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrell et al. (5,301,287) as applied to claims 9-10 above, and further in view of McLellan et al. (5,890,201).

a. As for claims 11-13, further add limitations regarding the VID-to-PID translation & a Multiplexer. Such limitations are commonly known in the DMA address translation art. As evidence, the McLellan teaches a similar DMA environment where a Multiplexer is utilized, As can be seen in figure 1. In addition, the examiner gives official notice on such well known or common knowledge in the art of address translation.

*Allowable Subject Matter*

7. Claims 1-8, 14-15, 38-39, and 42-46 are allowable.

*Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. **Any Response To This Action Should Be Mailed To:**

**If The Action Is Non-Final**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 746-5678, (for formal communications intended for entry)

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**If The action is Final**

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Washington, D.C. 20231

**or faxed to:**

(703) 746-5678, (for formal communications; please mark "EXPEDITED  
PROCEDURE")

**Hand-delivered responses should be brought to**

Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

**Any Other Telephone Communication Should Be Directed To**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Shin whose telephone number is (703) 305-9658. The examiner can normally be reached on Tuesday - Friday from 7:00 AM to 4:00 PM. A courtesy phone call after a Fax communication is greatly appreciated.

Christopher B. Shin  
December 19, 2001

*Christopher B. Shin*

**PRIMARY EXAMINER**

**ART UNIT 2182**

